

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019

Subject Code: 2180712

Date: 29/11/2019

Subject Name: Cloud Infrastructure And Services

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is Cloud and Cloud Computing? Differentiate Conventional Computing and Cloud Computing. **03**
- (b) What is a Hypervisor? How Type-1 and Type-2 Hypervisor works? **04**
- (c) What is Virtualization? What is the role of virtualization in cloud computing? Which form of virtualization is used in cloud for effective resource utilization? **07**
- Q.2** (a) What are service elasticity and service orchestration in cloud computing? What are the issues of Software as a Service (SaaS)? **03**
- (b) Write steps to host and access GTU examination system on AWS public cloud (Mention proper addressing and machine configuration). **04**
- (c) Which are the deployment models of cloud? How do private cloud works? The Gujarat Technological University wants to manage and Analyze Engineering student's record on a cloud. Which Deployment is suitable for this scenario? Why? **07**
- OR**
- (c) Which are the service models of cloud? Which service model is suitable for storing the large amount of data and performing heavy computation tasks of a Scientific research lab? Justify your answer. **07**
- Q.3** (a) How do multi tenancy and service elasticity can be achieved in cloud computing? **03**
- (b) What is Amazon EC2? How to connect virtual Ubuntu server hosted on AWS public cloud? **04**
- (c) Differentiate Full and Para Virtualization. Why operating system is needed to be modified in Para Virtualization? How does Hardware Assisted Virtualization work? **07**
- OR**
- Q.3** (a) How do you automatically start and stop Amazon EC2 instance? How does AWS handle availability? Which are the Availability zones of Amazon cloud? **03**
- (b) What is virtual computing and virtual machine? What is role of machine imaging in the Amazon cloud platform? **04**
- (c) What is load balancing? How does Amazon Cloud perform load balancing? How does AWS Elastic load balancer work? **07**
- Q.4** (a) What is Amazon ElastiCache? What are Amazon ElastiCache nodes, shards and clusters? **03**
- (b) What is NoSQL database? What is AWS Elastic Block storage? Write steps to access data stored on Elastic Block Storage? **04**
- (c) What is Amazon Glacier? How does it work? Differentiate Glacier and S3. **07**
- OR**
- Q.4** (a) What are DynamoDB and SimpleDB? What is the maximum storage capacity of DynamoDB and SimpleDB? **03**
- (b) What is Amazon S3? How do you access Amazon S3 data using API? **04**
- (c) Which database services are available on Amazon Cloud? What is use of Amazon RedShift? What are the limitations of RedShift? **07**

- Q.5 (a) What is the use of CloudWatch and CloudFormation? **03**
(b) What are security vulnerabilities of the public cloud platform? How does Amazon cloud handle security issues? **04**
(c) What are the possible disasters in public cloud? How does Amazon Cloud handle Disaster recovery? **07**

OR

- Q.5 (a) What is use of CloudTrail in Amazon cloud? **03**
(b) What is Big Data Analytics? What is the use of DataLake in Amazon Cloud? **04**
(c) What is need of Identity and Access Management in public cloud? How five engineering students can share their Amazon Account? Write necessary steps to perform this task. **07**

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